

IN THE CLAIMS:

1. (Currently Amended) A sintered body for thermistor elements ~~containing comprising~~ Sr, Y, Mn, Al, Fe, and O, ~~which is characterized in that not only wherein~~ crystal phases of a perovskite type oxide, ~~[[and]]~~ a garnet type oxide, ~~are contained, but also a crystal phase and at least one of [[of an]] a Sr-Al based oxide or and [[an]] a Sr-Fe based oxide or both is contained.~~ are present, and wherein FeYO_3 and/or AlYO_3 is selected as said perovskite type oxide, and at least one compound selected from the group consisting of $\text{Y}_3\text{Al}_5\text{O}_{12}$, $\text{Al}_7\text{Fe}_3\text{Y}_3\text{O}_{12}$, and $\text{Al}_3\text{Fe}_3\text{Y}_3\text{O}_{12}$ is selected as said garnet type oxide, respectively by powder X-ray diffraction analysis.

2. (Cancelled)

3. (Previously Presented) The sintered body for thermistor elements according to claim 1, wherein in said perovskite type oxide and/or said garnet type oxide, there is Sr solid solution in the Y site, Mn and/or Fe solid solution in the Al site, and Al and/or Mn solid solution in the Fe site.

4. (Currently Amended) The sintered body for thermistor elements according to claim 1, wherein when the mole number of Sr is defined as x, the mole number of y is defined as $(1 - x)$, the mole number of Mn is defined as y, the mole number of Al is defined as z, and the mole number of Fe is defined as $(1 - y - z)$, wherein x, y, and z have the relationship of $0.090 \leq x \leq 0.178$, $0.090 \leq y \leq 0.178$, $z \geq 0.275$, and $(1 - y - z) \geq 0.025$.

5. (Currently Amended) The sintered body for thermistor elements according to claim 1, ~~which also contains~~ further comprising Si.

6. (Previously Presented) The sintered body for thermistor elements according to claim 5, wherein FeYO_3 and/or AlYO_3 is defined as said perovskite type oxide, and at least one compound selected from the group consisting of $\text{Y}_3\text{Al}_5\text{O}_{12}$, $\text{Al}_2\text{Fe}_3\text{Y}_3\text{O}_{12}$, and $\text{Al}_3\text{Fe}_3\text{Y}_3\text{O}_{12}$ is selected as said garnet type oxide, by power X-ray diffraction analysis.

7. (Previously Presented) The sintered body for thermistor elements according to claim 5, wherein in said perovskite type oxide and/or said garnet type oxide, there is Sr solid solution in the Y site, Mn and/or Fe solid solution in the Al site, and Al and/or Mn solid solution in the Fe site.

8. (Currently Amended) The sintered body for thermistor elements according to claim 5, wherein when the mole number of Sr is defined as x, the mole number of Y is defined as $(1 - x)$, the mole number of Mn is defined as y, the mole number of Al is defined as z, and the mole number of Fe is defined as $(1 - y - z)$, wherein x, y and z have the relationship of $0.090 \leq x \leq 0.178$, $0.090 \leq y \leq 0.178$, $z \geq 0.275$, and $(1 - y - z) \geq 0.025$.

9. (Currently Amended) A process for producing a sintered body for thermistor elements, ~~which is characterized by comprising~~ mixing respective raw material powders containing elemental Sr, Y, Mn, Al, and Fe and calcining the mixture to form a calcined powder; subsequently molding a thermistor forming powder comprising a mixture of ~~[[this]]~~ the calcined powder with a sintering assistant containing at least elemental Si; and then calcining the resulting molded compact to obtain a sintered body for thermistor element, ~~containing not only wherein~~ the sintered body comprises crystal phases of a perovskite type oxide, ~~[[and]]~~ a garnet type oxide, ~~but also a crystal phase and at least one of [[an]] a Sr-Al based oxide or and [[an]] a Sr-Fe based oxide or both, and~~

wherein FeYO_3 and/or AlYO_3 is selected as said perovskite type oxide, and at least one compound selected from the group consisting of $\text{Y}_3\text{Al}_5\text{O}_{12}$, $\text{Al}_2\text{Fe}_3\text{Y}_3\text{O}_{12}$, and $\text{Al}_3\text{Fe}_3\text{Y}_3\text{O}_{12}$ is selected as said garnet type oxide, respectively by powder X-ray diffraction analysis.

10. (Currently Amended) A process for producing a sintered body for thermistor elements, ~~which is characterized by comprising~~ mixing respective raw material powders substantially free from elemental Si and containing elemental Sr, Y, Mn, Al, and Fe, and calcining the mixture to form a calcined powder; subsequently molding the thermistor forming powder obtained by pulverizing ~~[[this]]~~ the calcined powder; and then calcining the resulting molded compact to obtain a sintered body for thermistor elements, ~~containing not only wherein the sintered body comprises~~ crystal phases of a perovskite type oxide, ~~[[and]] a garnet type oxide, but also a crystal phase and at least one of [[an]] a Sr-Al based oxide or and [[an]] a Sr-Fe based oxide or both,~~ and substantially free from Si~~[[.]], and~~
wherein FeYO_3 and/or AlYO_3 is selected as said perovskite type oxide, and at least one compound selected from the group consisting of $\text{Y}_3\text{Al}_5\text{O}_{12}$, $\text{Al}_2\text{Fe}_3\text{Y}_3\text{O}_{12}$, and $\text{Al}_3\text{Fe}_3\text{Y}_3\text{O}_{12}$ is selected as said garnet type oxide, respectively by powder X-ray diffraction analysis.

11. (Currently Amended) A thermistor element, which is characterized by using a sintered body for thermistor elements ~~containing comprising~~ Sr, Y, Mn, Al, Fe, and O, wherein ~~not only~~ crystal phases of a perovskite type oxide, ~~[[and]] a garnet type oxide, are contained, but also a crystal phase and at least one of [[an]] a Sr-Al based oxide or and [[an]] a Sr-Fe based oxide or both is contained, are present,~~ and wherein FeYO_3 and/or AlYO_3 is selected as said perovskite type oxide, and at least one compound selected from the group consisting of $\text{Y}_3\text{Al}_5\text{O}_{12}$, $\text{Al}_2\text{Fe}_3\text{Y}_3\text{O}_{12}$, and $\text{Al}_3\text{Fe}_3\text{Y}_3\text{O}_{12}$ is selected as said garnet type oxide, respectively by powder X-ray diffraction analysis.

12. (Currently Amended) A temperature sensor, which is characterized by using a sintered body for thermistor elements ~~containing~~ comprising Sr, Y, Mn, Al, Fe, and O, wherein ~~not only~~ respective crystal phases of a perovskite type oxide, ~~[[and]]~~ a garnet type oxide, ~~are contained,~~ but also a crystal phase and at least one of ~~[[an]]~~ a Sr-Al based oxide ~~or~~ and ~~[[an]]~~ a Sr-Fe based oxide ~~or both is contained,~~ are present, and wherein FeYO₃ and/or AlYO₃ is selected as said perovskite type oxide, and at least one compound selected from the group consisting of Y₃Al₅O₁₂, Al₂Fe₃Y₃O₁₂, and Al₃Fe₃Y₃O₁₂ is selected as said garnet type oxide, respectively by powder X-ray diffraction analysis.

13. (New) A sintered body for thermistor elements comprising Sr, Y, Mn, Al, Fe and O, wherein crystal phases of a perovskite type oxide, a garnet type oxide, and at least one of a Sr-Al based oxide and a Se-Fe based oide are present, and wherein when the mole number of Sr is defined as x, the mole number of y is defined as (1-x), the mole number of Mn is defined as y, the mole number of Al is defined as z, and the mole number of Fe is defined as (1-y-z), wherein x, y and z have the relationship of $0.120 \leq x \leq 0.166$, $0.120 \leq y \leq 0.166$, $0.494 \leq z \leq 0.793$, and $(1-y-z) \geq 0.080$.

14. (New) The sintered body for thermistor elements according to claim 13, wherein in said perovskite type oxide and/or said garnet type oxide, there is a Sr solid solution in the Y site, a Mn and/or Fe solid solution in the Al site, and Al and/or Mn solid solution in the Fe site.

15. (New) The sintered body for thermistor elements according to claim 13, which further comprises Si.